

Title (en)
Low-pass filter based delta-sigma modulator

Title (de)
Delta -Sigma-Modulator basierend auf Tiefpassfiltern

Title (fr)
Modulateur Delta-Sigma basé sur filtre passe-bas

Publication
EP 1777825 B1 20100407 (EN)

Application
EP 06022057 A 20061020

Priority
US 25579205 A 20051021

Abstract (en)
[origin: EP1777825A1] In an embodiment, a delta-sigma modulator is constructed from one or more stages of a first order low-pass filter, which has a modest gain compared to the integrator used in other embodiments of delta-sigma modulators. Delta-sigma modulators can be converted into low-pass filter based delta-sigma modulators according to an embodiment of the invention by replacing the ideal integrator building block with a first order low-pass filter and adjusting other loop parameters, such as gain factors, accordingly. In an embodiment, a dithering technique to suppress spurious tones can be used with the low-pass filter based, ideal integrator based, or near ideal integrator based delta-sigma modulator. In another embodiment, a noise cancellation technique can also be used to cancel the dithering noise.

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H03M 3/02 (2006.01)

CPC (source: EP US)
H03M 3/33 (2013.01 - EP US); **H03M 3/43** (2013.01 - EP US)

Citation (examination)
US 4558361 A 19851210 - CATROS JEAN-YVES [FR]

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KR101141887B1; US11743647B2; US7623053B2; WO2020123550A3; WO2009042011A1; WO2008156480A1; US7714757B2

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